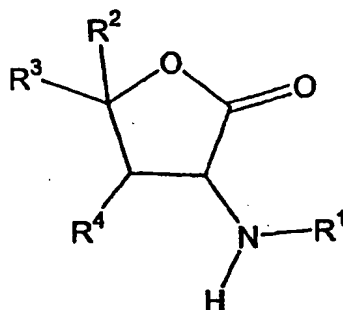


### III. CLAIM AMENDMENTS

1. (Original) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I,



in which

$R^1$  denotes an optionally at least mono-substituted 2- pyridyl, 2-pyrimidyl, 2-pyrazolyl, 2-quinolinyl or 2- pyrazinyl residue, which may also be fused with a saturated or at least partially unsaturated hydrocarbon ring system,

$R^2$  denotes an optionally at least mono-substituted, saturated, branched or unbranched aliphatic  $C_{1-10}$  residue or an optionally at least mono-substituted, at least partially unsaturated, branched or unbranched aliphatic  $C_{2-10}$  residue,

$R^3$  denotes an optionally at least mono-substituted aryl residue,

$R^4$  denotes H,

or

R<sup>3</sup> and R<sup>4</sup> together denote an optionally at least mono-substituted, saturated or at least mono-unsaturated aliphatic C<sub>3-7</sub> residue, with the proviso that the residue R<sup>2</sup> in this case denotes an optionally at least mono-substituted aryl residue, an optionally at least mono-substituted, saturated, branched or unbranched aliphatic C<sub>1-10</sub> residue or an optionally at least mono-substituted, at least partially unsaturated, branched or unbranched aliphatic C<sub>2-10</sub> residue,

in the form of the racemates, diastereomers or enantiomers thereof as a free base or of a corresponding physiologically acceptable salt for the production of a pharmaceutical preparation for the treatment of migraine.

2. (Original) Use according to claim 1, characterised in that R<sup>1</sup> denotes an optionally at least mono-substituted 2-pyridyl-residue, which may also be fused with a saturated or at least partially unsaturated hydrocarbon ring system, preferably denotes a 2-pyridyl residue which is substituted at least in position 4.
3. (Currently Amended) Use according to claim 1 ~~or 2~~, characterised in that R<sup>2</sup> denotes an optionally at least mono-substituted, branched or unbranched C<sub>1-6</sub>-residue.
4. (Currently Amended) Use according to ~~one of claims 1 to 3~~ claim 1, characterised in that R<sup>3</sup> denotes an

optionally at least mono- substituted aryl residue  
and R<sup>4</sup> denotes H.

5. (Currently Amended) Use according to ~~one of claims 1 to 4~~claim 1, characterised in that the compound used of the general formula I according to claim 1 comprises at least one compound selected from the group consisting of

5-(2,4-Dimethyl-phenyl)-3-(8-hydroxy-quinolin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(3,4-Dimethyl-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(2,4-Dimethyl-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(4-Cyclohexyl-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(3,5-Dimethyl-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(3,4-Dimethyl-phenyl)-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(2,4-Dimethyl-phenyl)-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(4-Cyclohexyl-phenyl)-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-Methyl-3-(quinolin-2-ylamino)-5-m-tolyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-methyl-5-p-tolyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-methyl-5-m-tolyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-(4-ethoxy-phenyl)-5-methyl-dihydro-furan-2-one,

4-[4-(3-Bromo-5-methyl-pyridin-2-ylamino)-2-methyl-5-oxo-tetrahydro-furan-2-yl]-benzonitrile,

3-(3-Bromo-5-methyl-pyridin-2-ylamino)-5-(4-tert-butyl-phenyl)-5-methyl-dihydro-furan-2-one,

5-(4-tert-Butyl-phenyl)-5-methyl-3-(6-propyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(4-tert-Butyl-phenyl)-5-methyl-3-(4-methyl-3-nitro-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(5-Bromo-6-methyl-pyridin-2-ylamino)-5-methyl-5-(4-phenoxy-phenyl)-dihydro-furan-2-one,

5-(4-tert-Butyl-phenyl)-5-methyl-3-(3-nitro-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(3-Benzyloxy-pyridin-2-ylamino)-5-methyl-5-(4-phenoxy-phenyl)-dihydro-furan-2-one,

3-(3-Benzoyloxy-pyridin-2-ylamino)-5-(4-tert-butyl-phenyl)-5-methyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-methyl-5-(4-phenoxy-phenyl)-dihydro-furan-2-one,

5-(4-tert-Butyl-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydrofuran-2-one,

5-Methyl-3-(4-methyl-pyridin-2-ylamino)-5-(4-phenoxy-phenyl)-dihydro-furan-2-one,

5-(4-tert-Butyl-phenyl)-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

4-[4-(5-Bromo-3-nitro-pyridin-2-ylamino)-2-methyl-5-oxo-tetrahydro-furan-2-yl]-benzonitrile,

4-[4-(5-Bromo-pyrimidin-2-ylamino)-2-methyl-5-oxo-tetrahydro-furan-2-yl]-benzonitrile,

5-Benzo[b]thiophen-2-yl-5-methyl-3-(6-propyl-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-(4-isopropyl-phenyl)-5-methyl-dihydro-furan-2-one,

5-Benzofuran-2-yl-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-Benzo[b]thiophen-2-yl-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-Benzofuran-2-yl-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(5-Benzo[1,3]dioxol-5-yl-5-methyl-2-oxo-tetrahydro-furan-3-ylamino)-1H-pyrazole-4-carbonitrile,

3-(5-Benzo[1,3]dioxol-5-yl-5-methyl-2-oxo-tetrahydro-furan-3-ylamino)-1H-pyrazole-4-carboxylic acid ethyl ester,

5-Benzo[1, 3]dioxol-5-yl-5-methyl-3-(3-nitro-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-methyl-5-(5,6,7,8-tetrahydro-naphthalen-2-yl)-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-methyl-5-naphthalen-2-yl-dihydro-furan-2-one,

5-Benzo[1,3]dioxol-5-yl-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-Methyl-3-(4-methyl-pyridin-2-ylamino)-5-(5,6,7,8-tetrahydro-naphthalen-2-yl)-dihydro-furan-2-one,

5-Benzo[1,3]dioxol-5-yl-5-methyl-3-(5-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-Benzo[1,3]dioxol-5-yl-5-methyl-3-(6-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(5-Bromo-3-nitro-pyridin-2-ylamino)-5-methyl-5-(5,6,7,8-tetrahydro-naphthalen-2-yl)-dihydro-furan-2-one,

3-(5-Bromo-3-nitro-pyridin-2-ylamino)-5-isopropyl-5-phenyl-dihydro-furan-2-one,

5-Isopropyl-3-(5-nitro-pyridin-2-ylamino)-5-phenyl-dihydro-furan-2-one,

5-Methyl-5-naphthalen-2-yl-3-(5-nitro-pyridin-2-ylamino)-dihydro-furan-2-one,

5-Isopropyl-5-phenyl-3-(pyrimidin-2-ylamino)-dihydrofuran-2-one,

3-[5-(4-Iodo-phenyl)-5-methyl-2-oxo-tetrahydro-furan-3-ylamino]-1H-pyrazole-4-carboxylic acid ethyl ester,

5-(4-Bromo-phenyl)-3-(5-bromo-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

3-(3-Bromo-5-methyl-pyridin-2-ylamino)-5-methyl-5-naphthalen-1-yl-dihydro-furan-2-one,

5-Methyl-5-naphthalen-1-yl-3-(6-propyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(3-Chloro-phenyl)-5-methyl-3-(6-propyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(3-Chloro-phenyl)-5-methyl-3-(4-methyl-3-nitro-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(4-Bromo-phenyl)-5-methyl-3-(4-methyl-3-nitro-pyridin-2-ylamino)-dihydro-furan-2-one,

3-(5-Bromo-6-methyl-pyridin-2-ylamino)-5-methyl-5-naphthalen-1-yl-dihydro-furan-2-one,

3-(5-Bromo-6-methyl-pyridin-2-ylamino)-5-(4-iodo-phenyl)-5-methyl-dihydro-furan-2-one,

3-(3-Benzyloxy-pyridin-2-ylamino)-5-(4-iodo-phenyl)-5-methyl-dihydro-furan-2-one,

3-(3-Benzyloxy-pyridin-2-ylamino)-5-(4-bromo-phenyl)-5-methyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-(4-iodo-phenyl)-5-methyl-dihydro-furan-2-one,

5-(3-Chloro-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(4-Bromo-phenyl)-5-methyl-3-(3-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(4-Bromo-phenyl)-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

2-[5-(3,5-Dimethoxy-phenyl)-5-methyl-2-oxo-tetrahydro-furan-3-ylamino]-4-propyl-pyrimidine-5-carboxylic acid ethyl ester,



3-(4-Bromo-1H-pyrazol-3-ylamino)-5-(3,5-dimethoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-(4-Bromo-1H-pyrazol-3-ylamino)-5-(2-methoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-[5-(2,5-Dimethoxy-phenyl)-5-methyl-2-oxo-tetrahydro-furan-3-ylamino]-1H-pyrazole-4-carbonitrile,

3-[5-(2,5-Dimethoxy-phenyl)-5-methyl-2-oxo-tetrahydro-furan-3-ylamino]-5-methylsulfanyl-1H-pyrazole-4-carbonitrile,

5-(2,5-Dimethoxy-phenyl)-5-methyl-3-(pyridin-2-ylamino)-dihydro-furan-2-one,

5-(2-Methoxy-phenyl)-5-methyl-3-(pyridin-2-ylamino)-dihydro-furan-2-one,

3-(3-Chloro-5-trifluoromethyl-pyridin-2-ylamino)-5-(3,5-dimethoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-(3-Chloro-5-trifluoromethyl-pyridin-2-ylamino)-5-(2,5-dimethoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-(3,5-Dichloro-pyridin-2-ylamino)-5-(2-methoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-(3-Chloro-5-trifluoromethyl-pyridin-2-ylamino)-5-(2,4-dimethoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-(3-methoxy-phenyl)-5-methyl-dihydro-furan-2-one,

3-(4,6-Dimethyl-pyridin-2-ylamino)-5-(4-methoxy-phenyl)-5-methyl-dihydro-furan-2-one,

5-(3,4-Dimethoxy-phenyl)-3-(4,6-dimethyl-pyridin-2-ylamino)-5-methyl-dihydro-furan-2-one,

5-(4-Methoxy-phenyl)-5-methyl-3-(4-methyl-pyridin-2-ylamino)-dihydro-furan-2-one,

5-(2,5-Dimethoxy-phenyl)-5-methyl-3-(pyrazin-2-ylamino)-dihydro-furan-2-one and

5-Methylsulfanyl-3-(2-oxo-5-phenyl-5-propyl-tetrahydro-furan-3-ylamino)-1H-pyrazole-4-carbonitrile

and the corresponding physiologically acceptable salts thereof, preferably the hydrochlorides thereof.

6. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of septic shock.

7. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of neurodegenerative diseases.
8. (Original) Use according to claim 7 for the production of a pharmaceutical preparation for the treatment of multiple sclerosis.
9. (Original) Use according to claim 7 for the production of a pharmaceutical preparation for the treatment of Parkinson's disease.
10. (Original) Use according to claim 7 for the production of a pharmaceutical preparation for the treatment of Alzheimer's disease.
11. (Original) Use according to claim 7 for the production of a pharmaceutical preparation for the treatment of Huntington's chorea.
12. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of inflammation.
13. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of inflammatory pain.

14. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of cerebral ischaemia.
15. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of diabetes.
16. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of meningitis.
17. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of arteriosclerosis.
18. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for wound healing.

19. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of neoplastic diseases.
20. (Currently Amended) Use of at least one substituted  $\gamma$ -lactone compound of the general formula I according to ~~one of claims 1 to 5~~claim 1 for the production of a pharmaceutical preparation for the treatment of fungal diseases.